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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,649	12/15/2004	Dominique Morche	034299-609	6776

7590 07/23/2007
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EXAMINER

LE, DINH THANH

ART UNIT	PAPER NUMBER
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2816

MAIL DATE	DELIVERY MODE
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07/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/518,649

Applicant(s)

MORCHE, DOMINIQUE

Examiner

DINH T. LE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8 is/are rejected.
- 7) ☒ Claim(s) 4,5,7 and 9-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

NON-FINAL REJECTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/26/07 has been entered.

Claims Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 8 are rejected under 35 USC 103 (a) as being unpatentable over Bell (US 6,876,239) in view of Staszewski et al (US2002/0033737, S/N=09/838,451).

Bell discloses in Figure 1 and 4E a DLL circuit comprising:

- a delay lines (112) comprising n delay cells (113-0 to 113-N);
- a phase detector (150); and
- a control means (130) having an output coupled to an input of the detector (150).

However, Bell does not disclose that the control means selects inputs at each clock signal and on basis of a control information.

Staszewski et al suggests in Figure 15 a PLL circuit comprising a control means (multiplexer) for selecting the delay outputs at a clock signal (CRK) and an information from the delay control (1502) for minimizing spurious tones, see the Abstract.

It would have been obvious to a person having skill in the art at the time the invention was made to employ the control circuit and the clock signal as suggested by Staszewski et al in the circuit of Bell for the purpose of minimizing spurious tones.

Applicant's Arguments

The applicant argues that in Bell, the COMMAND_SET signal which controls the multiplexer 130 changes only when it is desired to modify the working mode of the memory. Furthermore, after a change of the COMMAND_SET signal, several XCLK clock cycles are necessary for the delay-locked loop (DLL) to be clamped--that is, for the delay of each DELAY STAGE to be established. Unlike the DLL of Claim 1, the Bell DLL does not allow the delay of each DELAY STAGE to be quickly modified. The ability to make the delay of each DELAY STAGE quickly modifiable allows obtaining, at a DELAY STAGE output, a desired delay average value that can progressively change. The arguments are not persuasive because the arguments are based on the limitation which is not recited in the rejected claims. There is nothing recited in the rejected claims anything about "allow the delay of each DELAY STAGE to be quickly modified".

The applicant argues that Staszewski relates to phase-locked loops (PLLs) and digitally-controlled oscillators (DCOs), not to delay-locked loops (DLLs). FIG. 15 in particular, to which the Office Action makes reference, relates to a DCO and the circuit therein is intended to solve

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spurious tones problems that are peculiar to DCOs. In FIG. 15, the shift register 1306 does not constitute a line of delay cells as claimed in Claim 1 of the present application, and the phase comparator 1504 does not receive the input signal of the delay chain. Moreover, the delay duration of a register in FIG. 15 is a function of the CKVD clock, and not of the signal output from the phase comparator. The arguments are not persuasive because Staszewski does suggest a control means (multiplexer) for selecting the delay outputs of a delay chain for a PLL circuit at a clock signal (CRK) and an information from the delay control (1502) for minimizing spurious tones. Thus, incorporating the suggestion of Staszewski into the circuit of Bell for minimizing spurious tones would have been obvious at the time of the invention.

Allowable Subject Matter

Claims 4-5, 7 and 9-12 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

The claims are allowed because the prior art of record does not suggest the sets of switches as combined in claim 4, the control information being a fractional value p/q as combined in claim 7, and the means as combined in claim 10.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT PASCAL, can be reached at (571) 272-1769.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

7/9/07

DINH T. LE
PRIMARY EXAMINER
